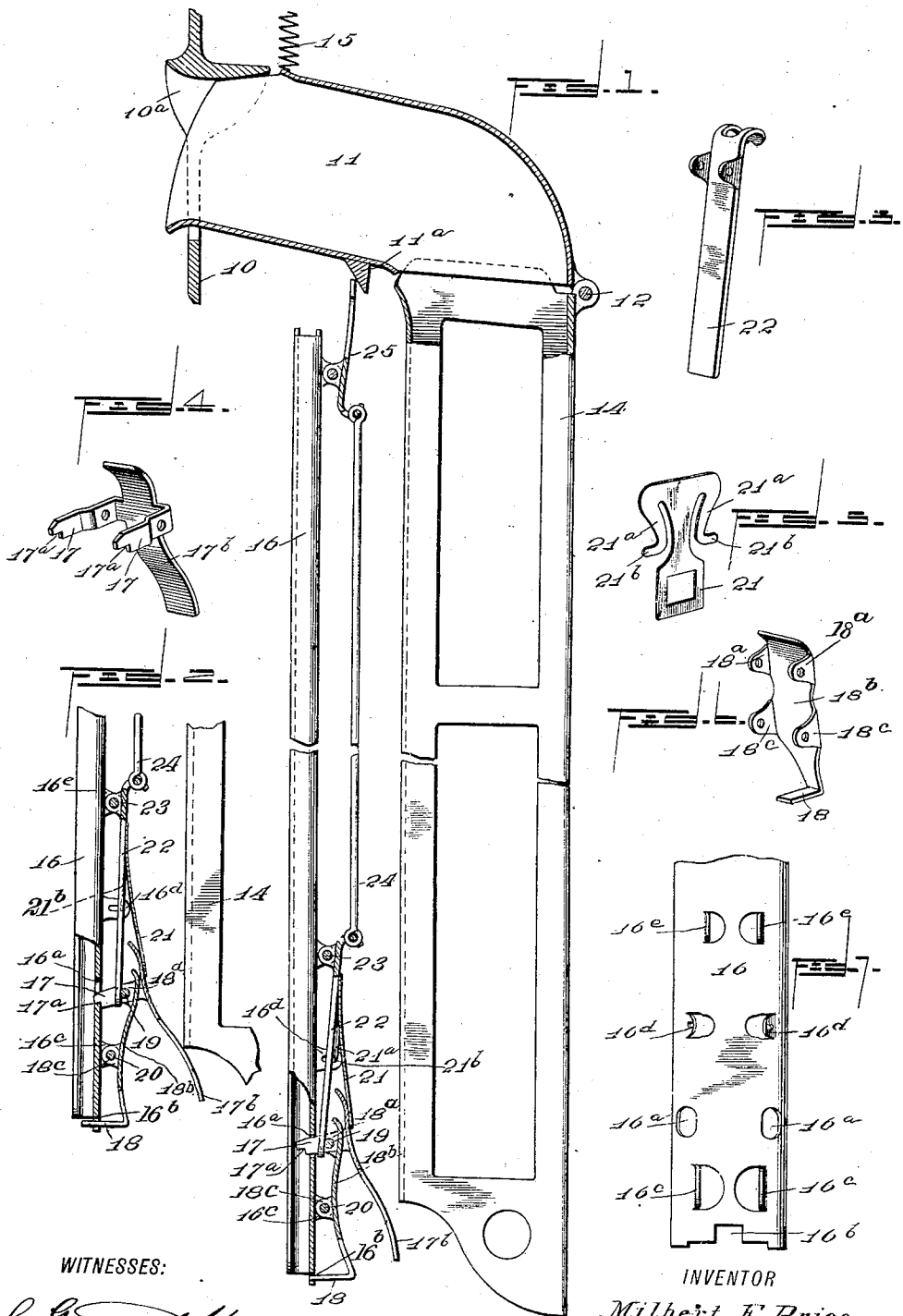
No. 862,655. PATENTED AUG. 6, 1907.

M. F. PRICE.

COIN CONTROLLED APPARATUS.

APPLICATION FILED JULY 29, 1904.



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COIN-CONTROLLED APPARATUS.

No. 862,655. Specification of Letters Patent. Patented Aug. 6, 1907

Application filed July 29, 1904. Serial No. 218,678.

To all whom it may concern:

Be it known that I, MILBERT FRANKLIN PRICE, a citizen of the United States, and a resident of Iowa City, in the county of Johnson and State of Iowa, have invented a new and Improved Coin-Controlled Apparatus, of which the following is a full, clear, and exact description.

The present invention relates to a coin-controlled apparatus, intended particularly for use in connection with collar button vending machines, but useful with various other apparatus, as will be apparent to skilled mechanics.

The invention is an improvement on the mechanism forming the subject-matter of my prior patent, No. 681,732, dated September 3, 1901, and of my co-pending application, Serial No. 210,954, filed June 3, 1904.

In the various apparatus disclosed in my prior patent and co-pending application, the merchandise chute is provided with two stops which are alternately operative, so that the articles of merchandise will be individually delivered from the chute. These stops are operated by certain peculiar devices in turn actuated by the coin as it is inserted.

The present improvements relate first to the peculiar arrangement and interconnection of the stops, and second to the peculiar connection between the same and the coin chute, whereby the coin upon its insertion into the machine serves automatically to bring about the said alternate operation of the stops and individually deliver the articles of merchandise.

Reference is to be had to the accompanying drawings, showing as example the preferred embodiment of my invention, in which drawings like letters of reference indicate like parts in the several views.

Figure 1 is a side elevation of the coin and merchandise chutes with parts in section, this view showing the appratus in its normal or active position. Fig. 2 is a fragmentary view of the coin and merchandise chutes, and illustrating the stops and their immediate allied parts in operation; Fig. 3 is a detail perspective view of the arm for retracting the upper stop or stops; Fig. 4 is a detail perspective view of the upper stops; Fig. 5 is a detail perspective view of the spring; Fig. 6 is a detail perspective view of the lower stop; and Fig. 7 is a fragmentary elevation showing the preferred form of the lower part of the merchandise chute.

In its practical embodiment, the apparatus is mounted in a case, a part of the wall of which is indicated at 10 in the drawings, said case having an opening 10^a through which loosely projects the upper section 11 of the coin chute. Said upper section 11 is tubular in form and is mounted by a hinge 12 on the lower section 14 of said chute. The upper section 11 of the coin chute is freely movable on its hinge 12 and within the opening 10^a, and is yieldingly held in the raised position shown in Fig. 1 by means of a spring 15. The coin, when inserted in the section 11 of the chute, and if of the proper size, will strike the lower part of said section and the upper wall of the opening 10^a, throwing said section 11 downward until its lower wall strikes the lower wall of the said opening 10^a. After the coin passes the opening 10^a it rolls freely down the section 11 into the perpendicular main part or lower section 14 of the coin chute, and finally the coin passes from the lower end of the chute into a suitable receptacle as is common in the art to which my invention relates.

16 indicates the merchandise chute, which is preferably of the same construction as is disclosed in my prior patent and co-pending application referred to.

According to the present form of the invention, two upper stops 17 are provided and one lower stop 18. The upper stops project through openings 16^a in the merchandise chute, and the lower stop projects through a notch 16^b in the lower extremity of said chute. The upper stops 17 are in the form of fingers having shoulders 17^a thereon, said fingers being carried by a body part 17^b, which is preferably integral with the fingers. The fingers or stops 17 are mounted to rock on a pin 19 which extends transversely of the chute at the rear side thereof, and is carried in lugs 18^a formed on the upper part of the body 18^b on the lower stop 18. Said stop fingers 17 are capable of assuming the active position shown in Fig. 1, by which they project into the merchandise chute to prevent the fall of the superimposed buttons, or to assume the inactive position shown in Fig. 2, in which they lie out of the chute, the shoulders 17^a bearing against the rear wall of the chute. The lower stop 18 has lugs 18^c formed on its body portion, and these lugs are mounted to rock around a pin 20 carried in lugs 16^c, preferably stamped up from the merchandise chute. The arrangement of the lower stop is such that it may occupy the retracted position shown in Fig. 1, allowing the button below the upper stops to fall from the merchandise chute, or it may occupy the active or protuberant position shown in Fig. 2, after which the stops lie within the chute and support the buttons above it. The parts are yieldingly held in both of the positions shown in Figs. 1 and 2 by means of a peculiar spring shown best in Fig. 5. This spring is formed preferably of an integral metal plate and has an arm 21 bearing on the upper portion of the body 17^b of the upper stops. At its upper end the arm carries two spring fingers 21^a terminating in trunnion-like extensions 21^b, these trunnions being mounted loosely in lugs 16^d formed on the merchandise chute and lying forward of the plane of the body part 17^b of the upper stop 17, so that the spring will exert the necessary tension on the two stops, holding them yieldingly in either of their two positions. An arm

22 lies between the spring and the merchandise chute thus yieldingly holding the arm in the position shown in Fig. 1. Said arm extends downward under the pin 19 and has its upper extremity fulcrumed on a pin 23 mounted in lugs 16^e stamped up from the merchandise chute. The upper extremity of the arm 22 is turned rearward and suitably connected with the link 24, which extends upward to a bell crank lever 25 fulcrumed on the upper part of the merchandise chute and adapted to be engaged by a cam surface 11^a on the upper section 11 of the coin chute.

The parts are so arranged that when the upper stops 17 are in the inactive position shown in Fig. 2, the lower end of the body 17^b of said stops will be thrown out in the path of the coin falling from the coin chute; when, however, the upper parts are active as shown in Fig. 1, the body 17^b lies out of said path of the coin. Assuming the parts to be in the position shown in Fig. 1, a coin inserted into the coin chute will depress the upper section 11 thereof, causing the cam surface 11^a to rock the lever 25 and move upward the link 24. This results in a rearward movement of the lower part of the arm 22 and in consequent reversal of the position of the stops 17 and 18, the parts then assuming the positions shown in Fig. 2, the superimposed pile of buttons resting upon the upper stops 17, and when said parts are retracted the pile of buttons falls on the lower part 18, which is then active. The parts are so proportioned that the distance between the stops is just sufficient to receive a single button, or two or more buttons in case the machine is designed to deliver a plurality of buttons for a single coin. After the coin has passed the upper section 11 of the coin chute, it falls rapidly through the main part 14 and strikes the protruded body part 17^b on the upper stops, throwing inward the same and disengaging the shoulders 17^a from the merchandise chute, thus permitting the spring to turn the parts to the positions shown in Fig. 1, during which operation the upper stops 17 are protruded to hold in the merchandise chute all of the buttons but one, and the lower stop 18 is retracted to permit this one button to fall freely from the merchandise chute and to be thereby delivered from the machine.

It will appear that by means of this device the insertion of the coin brings about the dropping of an article of merchandise into position for delivery, and then if the coin proves to be of the proper size, weight, etc. as it passes from the coin chute it throws the parts back into normal position, which results in the delivery of one of the collar buttons (or two or more if the machine is so proportioned) and in holding in the chute the remainder of the buttons in position for a subsequent operation, the same as above described.

Various changes in the form, proportions and minor details of my invention may be resorted to without departing from the spirit and scope thereof. I consider myself entitled to all such variations as may lie within the scope of my claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. The combination with a merchandise chute and a coin chute having a movable member, of two stops coacting with the merchandise chute, a connection between the stops to cause them to operate alternately, one of said stops having a shoulder adapted to engage a stationary part to hold it in inactive position, means tending to yieldingly press said shoulder against said stationary part, means for operating the stop from the movable member of the coin chute to move the said stop with its shoulder in engagement with the stationary part, and means controlled by the dropping of the coin from said chute for releasing the said stop to permit it to move into active position.

2. The combination with a merchandise chute and a coin chute having a reciprocating member, of two stops coacting with the merchandise chute, a connection between the stops to cause them to operate alternately, one of said stops having a shoulder thereon adapted to engage with the merchandise chute to hold said stop in inactive position, a spring pressing said stop toward its active position, means for moving the stop into inactive position and engaging its shoulder with the merchandise chute, from the reciprocating member of the coin chute, and means for disengaging said shoulder from the merchandise chute by the dropping of the coin from said chute to permit said stop to move into active position.

3. The combination of a merchandise chute, two spring pressed and alternately operating stops for the chute, the upper stop having a shoulder adapted to engage the chute to hold it in inactive position, a coin chute having a movable member, means for operating the stops from the movable member of the coin chute to move the upper stop into inactive position with its shoulder in engagement with the merchandise chute and the lower stop into active position, and means for disengaging the upper stop from the merchandise chute by the passage of the coin through the coin chute to permit the said stop to move into active position and the lower stop into inactive position.

4. The combination of a coin chute having a reciprocating member at its upper end, a merchandise chute, two spring pressed and alternately operating stops for the merchandise chute, the upper stop having a shoulder adapted to engage the chute to hold said stop in inactive position, means for operating the stops from the reciprocating member of the coin chute to move the upper stop into inactive position with its shoulder in engagement with the chute and the lower stop into active position, and a member carried by the upper stop and projecting into the path of the coin dropping from the coin chute when the shoulder of said stop is in engagement with the merchandise chute.

5. The combination of a coin chute having a reciprocating member at its upper end, said reciprocating member having a cam thereon, a merchandise chute, two spring pressed and alternately operating stops for the merchandise chute, the upper stop having a shoulder adapted to engage the merchandise chute to hold said stop in inactive position, an elbow lever operatively connected with the stops and projecting into the path of the cam on the reciprocating member of the coin chute, and a member carried by the shouldered stop and projecting below the discharge end of the coin chute when the shoulder of the said stop is in engagement with the merchandise chute.

6. The combination of a coin chute having a reciprocating member, a merchandise chute, a feeding device for the merchandise chute, means for operating the feeding device from the reciprocating member of the coin chute to feed the articles in position for delivery, and means operated by the dropping of the coin from the coin chute for operating the feed device to permit the discharge of the articles from the said chute.

7. The combination of a casing wall having an opening therein, a coin chute having a hingedly mounted part projecting into the opening whereby, upon the insertion of a coin, said hingedly mounted part will be operative, a merchandise chute, means for controlling the delivery therefrom, an operating member in connection with said means and juxtaposed to the discharge end of the coin chute for the purpose specified, a link connected with said means, also to operate it, an elbow lever connected with the link, and a cam on the movable part of the coin chute, said cam engaging the elbow lever to operate it upon the operation of the movable part of the coin chute.

8. The combination of a coin chute having a reciprocating member, a merchandise chute, a feeding device for the merchandise chute, means for operating the feeding device

from the reciprocating member of the coin chute to feed the articles into position for delivery, and a member carried by the feeding device and adapted to project into the path of the coin dropping from the coin chute, whereby the feed device will be operated by the coin to permit of the discharge of the articles from said chute.

9. A vending machine embodying a reciprocally supported coin chute depressible by an incoming coin, a merchandise hopper, mechanism supported from said hopper adapted to first receive the merchandise and then deliver the same, and mechanism carried by the coin chute to operate said first named mechanism to receive the merchandise by the depression of said chute and then deliver the merchandise on the dropping of the coin.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MILBERT FRANKLIN PRICE.

Witnesses:

H. A. ROBINSON,

LILLIAN HENDERSON.